

Patent claims

1. A cervical prosthesis consisting of a lower cover plate (10) which is to be connected to a lower vertebral body (5), an upper cover plate (11) which is to be connected to an upper vertebral body (3), and a prosthesis core (12) which forms a hinged connection between the upper cover plate and lower cover plate, the bottom surface of the lower cover plate being substantially flat, wherein the top face (14) of the upper cover plate (11) is convex at least in sagittal section.
2. The prosthesis as claimed in claim 1, wherein the top surface (14) of the upper cover plate (11) has a bulge which, in sagittal section, lies between a circle contour with a radius of curvature of not more than 25 mm and an acute-angled contour (15) with an apex angle (19) of not more than 90°.
3. The prosthesis as claimed in claim 2, wherein the top surface (14) of the upper cover plate (11) is formed by a surface of rotation.
4. The prosthesis as claimed in claim 2, wherein the top surface (14) of the upper cover plate (11) is elongate in the lateral direction.
5. The prosthesis as claimed in claim 4, wherein the top surface (14) of the upper cover plate (11) is made up of three surface portions (36, 38), of which the two outer portions

- 14 -

- (36) are opposite surfaces of half rotation, and of which the portion (38) lying between them consists of parallel generatrices (38) which connect the mutually facing limits of the surfaces of half rotation (36) to one another.
6. An instrument for milling the vertebral surface (2) cooperating with the top surface (14) of the upper cover plate (11) of the prosthesis as claimed in one of claims 1 through 5, wherein it has a base plate (20, 30) suitable for bearing on the lower vertebral body (5), and a milling tool (22) mounted on the base plate (20, 30) for the upper vertebral body (3).
 7. The instrument as claimed in claim 6, wherein the contour shape of the base plate (20, 30) is adapted to the shape of the end plate (4) of the lower vertebral body (5).
 8. The instrument as claimed in claim 6 or 7, wherein the axis of rotation (24) of the milling tool (22) is arranged transversely with respect to the base plate (20, 30), and the working surface of the milling tool (22) substantially matches a part (36), designed as rotation shape, of the top surface (14) of the upper cover plate (11).
 9. The instrument as claimed in claim 8, wherein the axis of rotation (24) of the milling tool (22) is fixed on the base plate (20).
 10. The instrument as claimed in claim 8, wherein the axis of rotation (32) of the milling tool (22) is displaceable along the base plate (30).

- 15 -

11. The instrument as claimed in claim 6, wherein the milling tool (40) rolls on the base plate (41).